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## Contribution to the knowledge of the Alleculinae (Coleoptera: Tenebrionidae) fauna of Turkey

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**A b s t r a c t :** This study is based upon material of subfamily Alleculinae collected from different localities of Turkey between 1965 and 2012. A total of 15 species and subspecies belonging to four genera (*Cteniopus*, *Megischia*, *Omophlus*, *Podonta*) within the subfamily Alleculinae were recorded from Turkey. Among them, *Omophlus caucasicus caucasicus* KIRSH 1869, *Omophlus caucasicus talyschensis* REITTER 1906, *Omophlus curtus* KUSTER 1850, *Omophlus latipleuris* REITTER 1890, *Omophlus medius* MUCHE 1964 and *Omophlus syriacus* MULSANT 1856 have been found the most abundant and widespread species and subspecies. In addition, new localities are added for some species previously reported for Turkey.

**K e y w o r d s :** Coleoptera, Tenebrionidae, Alleculinae, fauna, Turkey.

### Introduction

Although previously considered to be a distinct family (Alleculidae), many recent authors are of the opinion that it should comprise a subfamily of the Tenebrionidae. The alleculines may be recognized by having pectinate or serrate tarsal claws. Adults of the species of the tribe Cteniopodini are mostly short lived, and can occur on vegetation and flower, where they may feed on pollen. The larvae are mostly inhabitants in the roots of plants and grasses or rotten wood, and may be encountered during forestry operations. Most species are of unknown economic importance, although larvae of *Omophlus*, *Podonta*, and related genera are root feeders, and have been recorded as pests of potatoes and sugarbeet in the western Palaearctic region (BOOTH et al. 1990).

Turkey is one of the most interesting countries located in the Palaearctic region, where most of the insect families including Alleculinae exist. ÖZBEK (1979), reported that the first record from Erzurum, *Omophlus caucasicus* KIRSCH 1869 makes damage on the leaves of potato plants in Erzurum and Pasinler plains. YILDIRIM & KILIÇ (2008), 41 species and subspecies belonging to four subgenera of *Omophlus* (*Odontomophlus*, *Omophlus*, *Paromophlus*, *Paurodontomophlus*) are recorded from Turkey. KILIÇ & YILDIRIM (2009), *Omophlus flavipennis* Küster is recorded as a new pest for the oleaster from Erzurum in Turkey. KAÇAR et al. (2010), *Omophlus nasreddini* REITTER 1890

(Coleoptera: Alleculidae) is recorded as a new pest for the olive orchards/trees in Gaziantep and Kilis province in Turkey.

The aim of this paper is to bring new collect and biological data on Alleculinae in Turkey. In this study, 15 species and subspecies of 4 genera belonging to subfamily Alleculinae within the family Tenebrionidae were recorded from Turkey.

## Materials and Methods

The material of the Alleculinae was collected from different localities of Turkey between 1965 and 2012. Provinces of the collected specimens are given in alphabetical order in the following list. The material is deposited in the Entomology Museum, Erzurum, Turkey (EMET).

## Results

In this study, a total of 15 species and subspecies belonging to four genera (*Cteniopus*, *Megischia*, *Omophilus*, *Podonta*) within the subfamily Alleculinae were recorded from Turkey.

### Subfamily Alleculinae

#### Genus *Cteniopus* SOLIER 1835

##### *Cteniopus anatolicus* PIC 1903

Material examined : Erzincan: Üzümlü, 1194 m, 14.VI.1984, 3♂♂.

##### *Cteniopus frater* REITTER 1903

Material examined : Erzurum: Oltu, 1400 m, 10.VII.1989, ♂.

##### *Cteniopus sulphureus* (LINNAEUS 1767)

Material examined : Niğde: Ulukışla, Çiftehan, 1050 m, 8.VIII.1999, ♀.

#### Genus *Megischia* REDTENBACHER 1845

##### *Megischia galbanata* (KIESENWETTER 1861)

Material examined : Mersin: Tarsus, 22 m, 30.IV.2010, 9♀♀, 5♂♂.

#### Genus *Omophilus* DAHL 1823

##### *Omophilus caucasicus caucasicus* KIRSH 1869

Material examined : Antalya: Serik, 20.VIII.1993, ♀, Adana: Kadirli, 26.IV.2010, ♀; Artvin: Yusufeli, 560 m, 5.VI.1996, ♀, İşhan, 5.V.1978, ♂; Bayburt: 1650 m, 17.VI.2010, ♀,

Kopdağı, 18.VIII.1997, ♂, Şehitler Çeşmesi, 2400 m, 17.VI.2010, 15♀♀, 4♂♂, Aydıntepe, Arpalı, 1550 m, 17.VI.2010, 2♀♀, ♂, Demirözü, 1650 m, 17.VI.2010, ♀; Bingöl: Hamamlar, 1300 m, 5.VI.2003, ♀, Ilıcalar, İç pınar, Derik Mezrası, Paşa Çeşmesi, 1100 m, 28.V.2006, ♀, Bitlis: 1545 m, 27.V.1989, 9♀♀; Çankırı: Ilgaz, 19.IV.1996, ♂; Erzincan: Kemaliye, Sandıklı, 21.VII.1984, ♀; Erzurum: 1850 m, 11.VI.1968, ♀, 12.VI.1978, ♀, 14.VI.1970, ♀, 15.VI.1988, 2♂♂, 23.VI.1977, 3♀♀, 25.VI.1966, ♀, 25.VI.1979, 3♀♀, 26.VI.1968, ♀, 30.VI.1997, ♀, 1.VII.1996, ♂, 2.VII.1968, ♀, 3.VII.1968, 2♀♀, ♂, 5.VII.1973, ♂, 9.VII.1997, ♀, 10.VII.1978, 18♀♀, 35♂♂, 11.VII.1968, ♂, ♀, Gölet, 20.VI.1969, ♀, 15.VII.1980, 3♀♀, 18.VII.1969, 2♀♀, 18.VII.1990, ♀, 19.VII.1978, 7♀♀, 6♂♂, 25.VII.1993, ♂, 27.VII.1976, 5♀♀, ♂, 27.VII.1990, 3♀♀, 1.VIII.1996, ♀♀, 3.VIII.2012, ♀, ♂, 4.VIII.1990, ♀, 19.VIII.1979, ♀, Atatürk University field, 1850 m, 10.VI.1996, 13♀♀, 16♂♂, 15.VI.1996, ♂, 23.VI.1977, ♀, 30.VI.1997, 2♂♂, 3.VII.1996, 3♀♀, 3♂♂, 7.VII.1993, ♀, 9.VII.1993, 8♀♀, 9.VII.1997, 3♀♀, 5♂♂, 10.VII.1978, ♂, 10.VII.1996, 34♀♀, 171♂♂, 15.VII.1980, ♀, ♂, 17.VII.1993, 3♀♀, ♂, 18.VII.1996, 4♀♀, 19♂♂, 21.VII.1997, 9♀♀, 9♂♂, 22.VII.1993, 2♀♀, 25.VII.1993, 2♀♀, 2♂♂, 27.VII.1976, ♀, 28.VII.1996, 16♀♀, 32♂♂, 25.VIII.2012, 2♂♂, Dumlubaba, 27.VII.1979, ♂, Dumlubaba, Güngörmez, 2300 m, 1.VII.2010, ♀, Gölet, 20.VI.1996, ♀, ♂, Karagöbek Mountain, 2200 m, 5.VII.1985, ♀, Palandöken, 2400 m, 1.VII.1996, ♀, 2.VII.1996, ♀, Aşkale, 30.V.1996, 2♀♀, 8.VII.1997, 2♀♀, ♂, 15.VII.1997, 44♀♀, 4♂♂, Küçükova, 1896 m, 5.VII.2012, ♂, Serçeme, 24.VI.1997, ♀, 29.VI.1997, ♀, ♂, 23.VII.1978, ♀, Tepebaşı, 15.VII.1997, 26♀♀, 2♂♂, Tepsicik, 2300 m, 5.VII.2012, ♀, Aziziye, Atlıkonak, 7.VII.1994, ♀, 13.VII.1997, 5♀♀, 2♂♂, Eğerti, 28.VII.1997, ♀, 3♂♂, Ilıca, 2215 m, 27.VIII.2012, ♂, Rizekent, 2200 m, 30.VII.1998, ♀, Yaylalı, 10.VII.1997, ♀, 15.VII.1997, 57♀♀, 24♂♂, Çat, Çiriş, 22.VI.1987, 4♀♀, 22.VIII.1987, 4♀♀, Hınıs, 1650 m, 25.VII.1997, ♀, Horasan, 1560 m, 12.VI.1977, 2♀♀, 4♂♂, Kırkgözel, 2.VIII.1987, 2♀♀, 2♂♂, Okular, 16.VI.1996, ♂, 26.VI.1997, 4♀♀, ♂, İspir, 1180 m, 25.VI.1971, ♀♀, Çayıröz, 4.VII.1997, 122♀♀, 7♂♂, Madenköprübaşı, 7.VII.1996, ♀, 21.VII.1997, ♂, Narman, 1650 m, 5.VII.1997, ♀, ♂, 27.VII.1997, 4♀♀, Kireçli Geçidi, 12.VII.1996, 2♂♂, Mahmutçavuş, 27.VII.1997, 9♀♀, Samikale, 12.VI.1996, ♂, Oltu, 1400 m, 16.V.1997, ♂, 17.V.1970, ♀, ♂, 26.VI.1997, ♀, 31.VII.1990, ♀, Çamlıbel, 2.VII.1997, 79♀♀, 7♂♂, Başaklı, 1700 m, 12.VI.1978, ♀, 15.VIII.1997, 2♂♂, 1900 m, 15.VIII.1997, 2♀♀, Sarısaz, 28.V.1997, 5♀♀, 24♂♂, Olur, Süngübayır, 1850 m, 24.VII.1996, 2♀♀, Pasınlar, 1760 m, 10.VII.1997, ♀, 11.VII.1996, ♀, ♂, Büyükdere, 11.VII.1996, 2♀♀, ♂, Çalıyazı, 10.VII.1997, 25♀♀, ♂, Pazaryolu, 3.VII.1997, 19♀♀, 9♂♂, Şenkaya, Turalı, 1700 m, 20.VI.1997, 3♀♀, 25.VIII.1997, ♀, Tortum, 1600 m, 9.VI.1996, ♀, 10.VI.1997, 103♀♀, 13♂♂, 12.VII.1996, ♀, Kireçlidag, 25.VI.1996, ♀, Pehlivanlı, 26.VII.1990, ♀, Şelale, 1.VI.1997, ♀, Yakutiye, Tafta, 1900 m, 14.VII.1997, 3♀♀, 3♂♂; Kilis: Elbeyli, 535 m, 14.V.2010, 2♀♀, ♂, 26.V.2010, 5♀♀, Eğlençe, 14.V.2010, 3♀♀, Erikliayla, 14.V.2010, 3♀♀, Kilcan, 14.V.2010, 7♀♀, Mercanlı, 14.V.2010, 4♀♀; Kars: Sankamış, Karakurt, 1600 m, 5.VIII.1997, ♀, 25.VIII.1997, 2♀♀; Mersin: Erdemli, 25.V.1997, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 17♀♀, 23♂♂; Tokat: Çevreli, 15.VII.1983, ♀, Niksar, 19.VII.1997, 2♂♂.

### *Omophlus causicus talyschensis* REITER 1906

**Material examined:** Bayburt: Kopdağı, Şehitler Çeşmesi, 2400 m, 17.VI.2010, 6♀♀, ♂, Demirözü, 1650 m, 17.VI.2010, ♀; Erzurum: 1850 m, 10.VI.1978, 2♀♀, 8♂♂, 3.VII.1996, ♀, 10.VII.1978, ♀, Atatürk University field, 1850 m, 30.VI.1997, ♀, 3♂♂, 10.VII.1996, 2♀♀, Dumlubaba, 27.VII.1979, ♂, Güngörmez, 2500 m, 28.VII.1998, ♀, Palandöken, 2500 m, 23.VII.1997, ♀, Aziziye, Atlıkonak, 7.VII.1994, ♀, Horasan, 26.VI.1996, 4♀♀, İspir, Çayıröz, 4.VII.1997, 2♀♀, Narman, 5.VII.1996, ♂, 27.VII.1997, ♀, Samikale, 12.VI.1996, ♀, Oltu, Çamlıbel, 1765 m, 2.VII.1997, 15♀♀, 11♂♂, Sütkans, 1700 m, 25.VII.1996, ♀, Sarısaz, 28.V.1997, 16♀♀, 2♂♂, Olur, Süngübayır, 1850 m, 24.VII.1996, 4♀♀, Tortum, 10.VI.1997, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 13♀♀.

### *Omophlus curtus* KUSTER 1850

**Material examined:** Bayburt: Kopdağı, Şehitler Çeşmesi, 2400 m, 17.VI.2010, 3♀♀, 3♂♂; Erzurum: 1850 m, 3.VI.1968, ♂, 10.VI.1978, 6♂♂, 12.VII.1979, ♂, 13.VII.1979, 2♂♂, 8.VIII.1979, 5♂♂, Atatürk University field, 1850 m, 30.VI.1997, 4♂♂, 9.VII.1997, ♂,

21.VII.1997, ♂, Dumlu, 27.VII.1979, 6♂♂, Palandöken, 2500 m, 29.VI.1997, ♂, Horasan, 1560 m, 12.VI.1977, 2♂♂, Oltu, Sarısaz, 28.V.1997, 3♂♂, Pasinler, 1760 m, 2.VII.1968, ♂, Şenkaya, 8.VII.1988, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 11♂♂.

### ***Omophlus eckerleini* MUCHE 1964**

**Material examined:** Erzurum: 1850 m, 13.VII.1979, ♂, Atatürk University field, 1850 m, 30.VI.1997, 2♂♂, Oltu, Başaklı, 1700 m, 15.VIII.1997, ♂, Tortum, 1600 m, 10.VI.1997, ♂; Kilis: Elbeyli, 535 m, 14.V.2010, 3♀♀, ♂, 26.V.2009, 9♀♀, 2♂♂, Akçalı, 14.V.2010, ♀, Eğlence, 14.V.2010, 4♀♀, Erikliyayla, 14.V.2010, ♀, ♂, Kılcan, 14.V.2010, 2♀♀, Mercanlı, 14.V.2010, 9♀♀.

### ***Omophlus latipleuris* REITTER 1890**

**Material examined:** Erzurum: 1850 m, 10.VI.1965, ♂, 10.VII.1978, 14♂♂, 11.VII.1968, ♀, Atatürk University field, 1850 m, 3.VII.1996, ♀, 2♂♂, 10.VII.1978, 7♀♀, 10.VII.1996, 7♀♀, 11♂♂, 30.VII.1997, ♂, Kombina, 8.IX.1988, ♂, Köşk, 29.VI.1996, ♀, Palandöken, 2400 m, 1.VII.1997, ♂, 23.VII.1996, ♀, 23.VII.1997, ♀, Aziziye, Rizekent, 2200 m, 30.VII.1998, ♀, Narman, 27.VII.1997, 2♀♀, ♂, Samikale, 12.VI.1996, ♂, Horasan, 12.VI.1977, 5♂♂, Okçular, 26.VI.1996, ♂, Oltu, Sarısaz, 28.V.1997, 4♀♀, 11♂♂ Olur, Süngübayır, 1850 m, 24.VII.1996, 3♀♀.

### ***Omophlus medius* MUCHE 1964**

**Material examined:** Bayburt: Kopdağı, Şehitler Çeşmesi, 2400 m, 17.VI.2010, 3♀♀, ♂; Erzurum: 1850 m, 13.VI.1980, ♂, 10.VII.1978, 5♀♀, 19♂♂, Atatürk University field, 1850 m, 30.VI.1997, ♂, 3.VII.1996, 2♀♀, 10.VII.1996, 3♀♀, 7♂♂, Palandöken, 2400 m, 3.VII.1996, 2♂♂, 10.VII.1997, 3♀♀, 23.VII.1997, 2♀♀, Horasan, 1560 m, 12.VI.1977, 2♀♀, Okçular, 1000 m, 26.VI.1996, ♀, ♂, Narman, 27.VII.1997, ♀, Oltu, 1400 m, 17.V.1970, 2♀♀, ♂, Sarısaz, 28.V.1997, 7♀♀, 10♂♂, Pasinler, 1760 m, 13.VI.1996, ♂, Tortum, Kireçlidağ, 25.VII.1996, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, ♀, 5♂♂.

### ***Omophlus nigripes* KUSTER 1850**

**Material examined:** Erzurum: Atatürk University field, 1850 m, 30.VI.1997, 4♂♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 3♀♀, 7♂♂.

### ***Omophlus nitidicollis* SEIDLITZ 1896**

**Material examined:** Erzurum: 1850 m, 11.V.1968, ♀, 10.VI.1978, ♀, 15.VII.1979, ♀, Atatürk University field, 1850 m, 3.VII.1996, ♂, Narman, 1650 m, 5.VII.1996, ♀, Pasinler, 1760 m, 13.VI.1996, ♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 8♀♀, 24♂♂.

### ***Omophlus obscurus* REITTER 1890**

**Material examined:** Bayburt: Aydıntepe, Arpalı, 1550 m, 17.VI.2010, ♀, 6♂♂.

### ***Omophlus syriacus* MULSANT 1856**

**Material examined:** Bingöl: Ilıcalar, İç pınar, Derik Mezrası, Paşa Çeşmesi, 1100 m, 28.V.2006, 3♀♀, ♂, Yenibaşlar, 1400 m, 5.VI.2003, ♀; Bitlis: 1553 m, 27.V.1989, ♀; Erzurum: Atatürk University field, 1850 m, 9.VII.1997, ♂, 10.VII.1996, ♂, 10.VII.1978, ♂, Aşkale, 15.VII.1997, ♀, Aziziye, Çatak, 2119 m, 28.VIII.2012, ♀, Yaylalı, 15.VII.1997, 2♀♀, ♂, Horasan, Kırkgözeler, 2.VII.1987, ♂, Okçular, 1000 m, 26.VI.1996, ♂, Narman, Mahmutçavuş, 27.VII.1997, 2♀♀, Oltu, Çamlıbel, 2.VII.1997, 12♀♀, Sarısaz, 28.V.1997, 5♀♀, Pazaryolu,

3.VII.1997, 2♀, Tortum, 1600 m, 10.VI.1997, ♀, Kilis: Elbeyli, Akçalı, 14.V.2010, ♀, ♂, Erikliyaayla, 14.V.2010, ♀, 3♂♂; Mersin: Tarsus, 30.VI.2010, 2♀, 2♂♂; Sanlıurfa: Ceylanpınar, 400 m, 4.V.1996, 8♀, 4♂♂.

### Genus *Podonta* SOLIER 1835

#### *Podonta soror* SEIDLITZ 1896

**Material examined:** Erzurum: Dumlı, 1850 m, 27.VII.1999, ♀, 2♂♂, Aziziye, Altikonak, 13.VII.1997, 7♂♂; Kars: Selim, 17.VII.1981, ♂; Konya: Güneysınır, Gürağaç, 1070 m, 19.VII.1999, ♀; Osmaniye: Nur Mountains, 24.V.1992, ♂.

### Zusammenfassung

Vorliegende Studie basiert auf Tenebrioniden-Material (Unterfamilie Alleculinae), das im Zeitraum 1965 bis 2012 an verschiedenen Orten der Türkei gesammelt wurde. Insgesamt konnten 15 Arten aus den Gattungen *Cteniopus*, *Megischia*, *Omophlus*, *Podonta* nachgewiesen werden.

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